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(21) International Application Number: PCT/EP98/04171 (22) International Filing Date: 29 June 1998 (29.06.98)		drik [NL/NL]; Onafhankelijkheidsweg 19, NL-2332 ZM Leiden (NL). ELZINGA, Nicolas [NL/NL]; Vianenstraat 200, NL-1106 DE Amsterdam (NL).	
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(54) Title: PLASMIDS FOR PLANT TRANSFORMATION AND METHOD FOR USING THE SAME

(57) Abstract

This invention relates to the *Agrobacterium* mediated plant transformation, especially to transformation of plants with T-DNA, where read-through at the borders is prohibited. This can be done by inhibition of transfer of vector DNA to the plant cell by creating DNA binding sites outside the T-borders, but also to insert a coding sequence outside the T-borders which, whether or not in cooperation with genes from the host plant or genes cotransferred, are toxic to plants so that there is counterselection for plants with superfluous vector-DNA.

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SEQUENCE LISTING

(1) GENERAL INFORMATION:

5

(i) APPLICANT:

#10
PGS

10 (A) NAME: MOGEN International nv
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(E) COUNTRY: The Netherlands
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15 (ii) TITLE OF INVENTION: Novel plasmids for plant transformation and method for using same.

(iii) NUMBER OF SEQUENCES: 18

20 (iv) COMPUTER READABLE FORM:

(A) MEDIUM TYPE: Floppy disk
(B) COMPUTER: IBM PC compatible
(C) OPERATING SYSTEM: PC-DOS/MS-DOS
(D) SOFTWARE: PatentIn Release #1.0, Version #1.25 (EPO)

25 (vi) PRIOR APPLICATION DATA:

(A) APPLICATION NUMBER: EP 97201990.5
(B) FILING DATE: 30-JUN-1997

30 (2) INFORMATION FOR SEQ ID NO: 1:

(i) SEQUENCE CHARACTERISTICS:

35 (A) LENGTH: 21 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

40 (iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

45

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 1:

50 GATGGCAAAC GCTAATAGGG G

21

(2) INFORMATION FOR SEQ ID NO: 2:

(i) SEQUENCE CHARACTERISTICS:

55 (A) LENGTH: 21 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

60

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

5

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 2:

GAGCGGGTTT AACCTACTTC C

21

10

(2) INFORMATION FOR SEQ ID NO: 3:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 39 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

20

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

25

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3:

CTGTTGTCGA CGGCTGGCTG GTGGCAGGAT ATATTGTGG

39

30

(2) INFORMATION FOR SEQ ID NO: 4:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 38 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

40

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4:

CCAGCCGTCG ACAACAGCTC CCCGACCGGC AGCTCGGC

38

50

(2) INFORMATION FOR SEQ ID NO: 5:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 44 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

5 (iii) ANTI-SENSE: NO

10 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 5:

TCGACGGGGT GCCTGGGGCG GTGGCGGGGC GGGCCGGGGC GTGC

44

(2) INFORMATION FOR SEQ ID NO: 6:

15 (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 44 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

20 (ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

25 (iii) ANTI-SENSE: NO

30 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 6:

TCGAGCACGC CCCGGCCCGC CCCGCCACCG CCCCAGGCAC CCCG

44

(2) INFORMATION FOR SEQ ID NO: 7:

35 (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 23 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

40 (ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

45 (iii) ANTI-SENSE: NO

50 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 7:

TTCTCGAGAG GGTGGTTAC TCG

23

(2) INFORMATION FOR SEQ ID NO: 8:

55 (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 23 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

60

5 (ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 8:

TTGTCGACTC CAAGACGCCG AGC

23

10

(2) INFORMATION FOR SEQ ID NO: 9:

15 (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 28 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

20 (ii) MOLECULE TYPE: cDNA

20

(iii) HYPOTHETICAL: NO

25

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 9:

AATTCAGATC TCCATGGATC GATGAGCT

28

30

(2) INFORMATION FOR SEQ ID NO: 10:

35 (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 20 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

40 (ii) MOLECULE TYPE: cDNA

40

(iii) HYPOTHETICAL: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 10:

45

CATCGATCCA TGGAGATCTG

20

(2) INFORMATION FOR SEQ ID NO: 11:

50 (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 12 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

5

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 11:

GATCGGGTCGA CC

10

12

(2) INFORMATION FOR SEQ ID NO: 12:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 23 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

20

(iii) HYPOTHETICAL: NO

25

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 12:

GACGCTAAAG GCAAACATTGA TTC

23

30

(2) INFORMATION FOR SEQ ID NO: 13:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 23 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

40

(iii) HYPOTHETICAL: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 13:

45

TTAACCTACT TCCTTTGGTT CCG

23

(2) INFORMATION FOR SEQ ID NO: 14:

(i) SEQUENCE CHARACTERISTICS:

50

- (A) LENGTH: 23 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

55

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

60

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 14:

AGCGGGCCAT TTTAGTAGAC GGG

23

5 (2) INFORMATION FOR SEQ ID NO: 15:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 28 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

15 (iii) HYPOTHETICAL: NO

20 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 15:

ATCAATTCGA ACCCCAGAGT CCCGTCCA

28

(2) INFORMATION FOR SEQ ID NO: 16:

25 (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 21 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

30 (ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

35 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 16:

40 CTGGATCGTT TCGCATGATT G

21

(2) INFORMATION FOR SEQ ID NO: 17:

45 (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 27 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

50 (ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

55 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 17:

CCAACATTATC AGTGATAAAAG AATCCGC

27

(2) INFORMATION FOR SEQ ID NO: 18:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 27 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

5 10 (ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

15 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 18:

GAGATCAGAT TGTCTGTTCC CGCCTTC

27